

# FoodPro

CSIR - CFTRI Newsletter

April - June 2025



Food Processing | Nutrition | Innovation | Value Addition  
Traditional Foods | Food Machinery | Shelf Life | Food Quality  
Nutraceuticals | Centre of Excellence | Pre & Probiotics | PMFME  
Skill Development | Technology Transfer | Incubation



ಸಿ.ಎಸ್.ಐ.ಆರ್-ಕೇಂದ್ರೀಯ ಆಹಾರ ತಂತ್ರಜ್ಞಾನ ಸಂಶೋಧನಾಲಯ, ಮೈಸೂರು  
सीएसआईआर - केंद्रीय खाद्य प्रौद्योगिक अनुसंधान संस्थान, मैसूरु  
CSIR – Central Food Technological Research Institute, Mysuru

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### Research Highlights

#### Investigating Curcuminoid Encapsulation in $\beta$ -Cyclodextrin : A Molecular Dive

Curcuminoids—key bioactive compounds in turmeric—offer significant health-promoting properties, but are hindered by poor aqueous solubility and limited bioavailability. This study delivers a comparative investigation into the encapsulation behavior of all three major curcuminoids: curcumin (CUR), demethoxycurcumin (DMC), and bisdemethoxycurcumin (BDMC) within  $\beta$ -cyclodextrin ( $\beta$ -CD), using a synergistic approach involving state-of-the-art NMR spectroscopy and molecular dynamics (MD) simulations.

#### Highlights from the study :

Comprehensive analysis of CUR, DMC, and BDMC inclusion complexes with  $\beta$ -CD.

- ✦ Phase solubility studies and NMR (1D, 2D-NOESY, DOSY) confirmed host–guest complex formation. Among the three, BDMC exhibited the strongest interaction with  $\beta$ -CD, supported by higher stability constants.
- ✦ NOESY cross-peaks and diffusion coefficients clearly indicated deeper inclusion of BDMC in the  $\beta$ -CD cavity.
- ✦ MD simulations revealed superior interaction of BDMC with  $\beta$ -CD due to the absence of  $-\text{OCH}_3$  groups, enhancing hydrogen bonding and cavity fit.
- ✦ Radial distribution functions (RDFs) and close contact analyses further validated the stronger encapsulation behavior of BDMC.

#### Significance :

- ✦ BDMC emerged as a superior candidate for  $\beta$ -CD-

based encapsulation due to its stronger and more stable interactions.

- ✦ Findings open new avenues for designing enhanced delivery systems for nutraceuticals and functional foods.
- ✦ The integrative use of NMR and MD offers mechanistic insights that can guide formulation strategies for hydrophobic bioactives.

#### Why it matters :

This study advances the understanding of curcuminoid encapsulation and reveals that not all curcuminoids behave the same in host–guest systems. By identifying BDMC as the most effective encapsulation candidate, the research contributes towards more efficacious and stable formulations for food and pharma industries.

(Source : Naresh K.S., Ansari S.J., Biswas A., Dandamudi U., Mogurampelly S., Chaudhari Sachin R. Investigating curcuminoid encapsulation in  $\beta$ -cyclodextrin: Insights from NMR spectroscopy and MD simulations, *Food Hydrocolloids*, 2025, 162, art. no. 110958)

#### Effect of UV-C LEDs and heat treatments on microbial safety, chemical and sensory properties of sweet lime juice

It evaluates the effect of UV-C LED treatment and conventional thermal processing on the microbial safety, chemical composition, and sensory attributes of sweet lime juice. The study aims to identify a suitable preservation method that ensures microbial safety while maintaining nutritional and sensory quality. UV-C LED treatment was found to significantly reduce microbial



load, comparable to heat treatment, but with minimal loss of heat-sensitive nutrients such as vitamin C. The study also examined parameters such as pH, TSS, acidity, and antioxidant activity, showing that UV-C LEDs better preserved the juice's natural properties. Sensory analysis indicated higher acceptability of UV-treated juice in terms of color, aroma, and overall freshness. The findings suggest that UV-C LED is a promising non-thermal alternative to pasteurization, offering enhanced

quality retention and energy efficiency. This approach aligns with consumer demand for minimally processed, fresh-like beverages with extended shelf life.

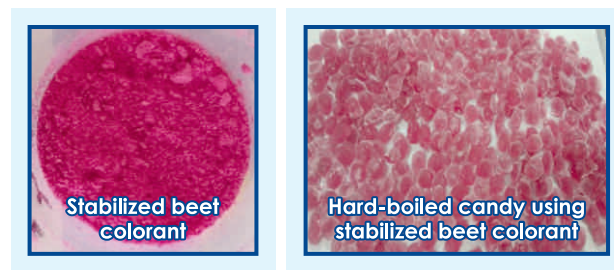
(Source: Dasalkar A.H., Biswas A., Chaudhari S.R., Yannam Sudheer Kumar. Effect of UV-C LEDs and heat treatments on microbial safety, chemical and sensory properties of sweet lime juice, *Food Chemistry*, 2025, 474, art. no. 143120)

## Products Developed

### Stabilized Beet Colorant

Food colorants are additives, natural and synthetic, that make food more appealing. Natural colorants are gaining popularity because of their health benefits. The beetroot juice concentrate (beet concentrate) is rich in vitamin B (B1, B2, B3, and B6) and folic acid. It also possesses a group of pigments called betalains, phenolics, sugar, and vitamin C. The pigments giving red colour to beetroot are bioactive compounds that have antioxidant properties. The beet concentrate was stabilized in a multilayer to impart stability under different processing conditions such as thermal treatment, pH variation, and photo-stimulation. The liquid or a powder formulation can be used in different food products. The stabilized beet colorant was used to prepare hard-boiled

candies wherein the color was retained at 146°C. The stabilized beet colorant can replace the use of synthetic colors, and make the food more attractive and appealing by increasing its nutritional properties without compromising its sensory attributes under suitable thermal and pH conditions.



## Technologies Transferred

- ✦ Fermented and dehydrated ready mixes for *Idli* batter
- ✦ Spirulina-choco bar and Spirulina-cereal bar
- ✦ Pickles & chutneys : preparation
- ✦ Chicken wafers & Egg wafers
- ✦ Preparation of shelf-stable Egg Albumin and Egg Yolk cubes
- ✦ Preparation of ready-to-eat shelf-stable Egg Crunchy bite
- ✦ Chicken pickle
- ✦ Tomato products : preparation (including juice, ketchup, sauce)
- ✦ Instant mushroom soup mix
- ✦ Bottling of sugarcane juice & fortified sugarcane beverage in glass bottles
- ✦ Osmo-air dried fruits (Amla, Jackfruit, Pineapple & Mango)
- ✦ Energy food : new formulation
- ✦ Nutra chikki with added Spirulina
- ✦ Chikki /Nutra chikki (3 formulations)
- ✦ Date syrup concentration
- ✦ Cereal flakes : Jowar
- ✦ Multigrain Pasta
- ✦ Fruit bar : Mango
- ✦ Jamun fruit products (Squash, RTS beverage, syrup)
- ✦ Fruit bars : Apple, Banana, Guava, Mango (all 4)
- ✦ Continuous *Idli* making machine
- ✦ Gongura leaf powder
- ✦ Continuous *Dosa* making machine
- ✦ Versatile dhal mill
- ✦ Vibro fluidized bed roaster
- ✦ Garlic paste
- ✦ Tutti fruity (Papaya/ Carrot)
- ✦ Instant gravy mixes (dehydrated)
- ✦ Shelf-stable varieties of curry pastes for vegetarian & non-vegetarian traditional cuisines
- ✦ Preparation of shelf stable biryani paste
- ✦ All wafers (Chicken, Fish, Prawn, Egg, Pork, Meat)
- ✦ Osmo-air dried fruits (Amla, Jackfruit, Pineapple & Mango)

- ✦ Ready spice mix formulation - Sambar
- ✦ Microbial production of Fructo-oligosaccharides (FOS) – syrup and powder
- ✦ Low fat expanded green snack using Moringa
- ✦ Roasted and flavoured cashew kernel

## Training Programmes Conducted

- ✦ Two-day workshop on **Food Safety & Standards Laws** was organized at CSIR-CFTRI, Mysuru from 24.04.2025 to 25.04.2025. Fifty-Seven participants attended the training programme. The training programme covered topics related to Overview of Food Safety and Standard Act, Licensing and Registration of Food Businesses.
- ✦ **Fumigation, Prophylaxis, and Pest Management Techniques for Stored Food Commodities** was organized at CSIR-CFTRI, Mysuru during 16.05.2025 to 30.05.2025. Forty-Four participants participated in the training programme. The training covered the important aspects of infestation control in stored products, Current R&D activities of FPIC and Insect pests of stored products-Identification, Behaviour and Biology, Fumigation: Principles and Techniques, Properties and application of Aluminium phosphide (Phosphine) formulation as per NSPM 22, Detection of insect infestation in stored food commodities and storage premises, Mosquitoes: Biology and Management at Household Levels and Houseflies: Ecology, behaviour, and their management, Role of traditional system for the protection of stored food grains, Methods of insect control (Physical, Chemical & Biological), Classes of pesticides and insecticide formulations, Controlled atmosphere for disinfestation and storage of food commodities as per NSPM 25 and Biological and Traditional techniques in food commodity storage.
- ✦ Short term training programme on **Empowering Ragi and Millet Growers in Odisha State** was successfully conducted from 04.06.2025 to 06.06.2025 for 33 women participants and two technologies have been transferred to two women SHGs.
- ✦ Training programme on **Analytical Techniques for Spices** was conducted during 09.06.2025 to 13.06.2025. The important concepts of Spices were covered.
- ✦ Training programme on **Millet Products** was held at CSIR-CFTRI, Resource Centre, Hyderabad during 11.06.2025 to 13.06.2025. The training covered the Processing of millets to prepare value-added millet products, Lectures on the general principles of processing and preservation, packaging and distribution, microbiological safety, and instrumental methods for quality control were delivered.
- ✦ **Nutri-Cereal Process & Products Technology** was held at CSIR-CFTRI, Mysuru during 16.06.2025 to 20.06.2025. (Sponsored by Dept. of Agriculture, Govt. of Karnataka under Krishi Navodyama Scheme). In this training, important concepts on Grain Diversity and structure, Maize milling machinery & process, Entrepreneurship in Food Processing, Processing of small millets and value addition, Small millet products demonstration- Beverage, malted ragi convenience flour, puffed grain, Resistant Starch in millets- Health Benefits and its applications, Effect of processing on biochemical changes and mycotoxin content in





grains, Millet semolina and its application, Millet storage & infestation control, Food safety & hygiene, Shelf stable millet flours and products were discussed.

- ✦ **Essentials of Packaging Technology for Thermal Processing Applications in Extension of Shelf Life and Food Safety** was conducted at 23.06.2025 – 25.06.2025. Introduction to Food Packaging and Sustainability, Microbiological Aspects of Food Spoilage, Metal Packaging Types, Lacquers for Food Applications, Food Packaging Machines, Role of Paper & Plastics in Food Packaging and Thermal Processing, Safety Evaluation of Food Packaging Materials, Hurdle Technology and Intermediate Moisture Foods, Demo – Fruits and Vegetables Canning Process were the key areas covered in this programme.



- ✦ **Network Meeting** for startups in the Food and Beverages Sectors was conducted on 27.06.2025.

Participants got to know the sneak peek into Incubation facility.

- ✦ **Essentials of Packaging Technology for Thermal Processing Applications in Extension of Shelf Life and Food Safety** was conducted at 30.06.2025 – 02.07.2025. (Sponsored by Dept. of Agriculture, Govt. of Karnataka under Krishi Navodyama Scheme) Introduction to Food Packaging and Sustainability, Microbiological Aspects of Food Spoilage, Metal Packaging Types, Lacquers for Food Applications, Food Packaging Machines, Role of Paper & Plastics in Food Packaging and Thermal Processing, Safety Evaluation of Food Packaging Materials, Hurdle Technology and Intermediate Moisture Foods, Demo – Fruits and Vegetables Canning Process were discussed.
- ✦ **Analytical Quality Evaluation of Fortified Rice** was conducted during 01.07.2025 – 03.07.2025. The course covered the Overview and quality aspects of fortified rice, Regulatory requirements of fortified rice, Vitamin B analytical steps, Principles and applications of HPLC, Detection methods for fortified rice kernels, Sample preparation and extraction steps of FRK, premix, for folic acid and B12 analysis, Principles of ICP MS and elemental analysis in fortified rice.

## Short Term Training Programmes Schedule for July - September 2025

- ✦ Ginger and Tamarind Technologies and Value Addition (02.07.2025 - 04.07.2025)
- ✦ Basic in Flour Milling and Quality Evaluation of Flour (07.07.2025 - 11.07.2025)
- ✦ Sensory Analysis-An approach to Consumer preference (16.07.2025 - 18.07.2025)
- ✦ Technique in Algal and Plant Biotechnology (21.07.2025 - 23.07.2025)
- ✦ Technique Related to Molecular Nutrition (23.07.2025 - 25.07.2025)
- ✦ Spices Processing and Value Addition (04.08.2025 - 08.08.2025)
- ✦ Strategies For Probiotic Dairy Product Development (11.08.2025 - 13.08.2025)
- ✦ Chromatographic Techniques (GC, HPLC, UHPLC) and their Analytical Approaches in Food Analysis (18.08.2025 - 22.08.2025)
- ✦ Baking Science and Technology (18.08.2025 - 22.08.2025)
- ✦ Fruits and Vegetable Products (04.08.2025 - 06.08.2025)
- ✦ Mango Product (08.09.2025 - 10.09.2025)
- ✦ Grain Process & Products for Health & Wellness (01.09.2025 - 03.09.2025)
- ✦ Advance in Value Addition of Meat, Poultry and Fish Products (08.09.2025 - 12.09.2025)

## New Collaborations

### ✧ ITC Limited, Bengaluru (May 22, 2025)

To jointly work on real-time, practical challenges and industry problems, and provide academic and/or technical inputs for potential solutions to such problems.



### ✧ Shriram Institute for Industrial Research, Bangalore (May 29, 2025)

For strategic positioning through collaborations between both institutions in meeting emerging scientific and technological challenges faced by society.

### ✧ Sri Sathya Sai Institute of Higher Learning, deemed to be University, Puttaparthi (June 23, 2025)

To undertake joint research projects to address emerging and critical challenges and jointly build a vibrant academic environment by encouraging interdisciplinary collaborations among students and faculty from both institutions.

## Entrepreneurs' Speak



At Maja Nature Foods, our journey is one of love, legacy, and honesty born from a mother and daughter's shared passion for authentic, traditional food.

What began as a family tradition in the kitchens of Siruguppa has now grown into a movement that empowers rural women, celebrates age-old recipes, and brings purity back to your plate. This is food the way it was meant to be: real, rooted, and responsibly made. We thank you for supporting our dream and choosing food that honors tradition and empowers the hands behind the scenes.

**MISSION :** Preserve and celebrate the rich culinary heritage of India by crafting authentic foods using time-honoured recipes.

**“Our mission: Purity on your plate, pride in every jar.”**

**VISION :** To become a trusted household name for authentic Indian condiments by preserving traditional recipes, empowering rural women, and offering hygienic, handcrafted foods that connect generations.

**“Where every jar tells a story of tradition, taste, and trust” Journey with CFTRI :** We have been technically trained from **CFTRI Mysore** to inculcate our Traditional recipes into commercial production by following the FSSAI standards. We at Maja Nature Foods extend our heartfelt gratitude to CFTRI for providing us with valuable technical training in making pickles and chutneys. Your expert guidance has not only enriched our knowledge but also instilled in us the confidence to scale up our production while staying true to our roots. With CFTRI's support, we are now better equipped to carry forward the legacy of authentic pickles, preserving tradition while embracing growth.



## BIRAC BioNEST

✧ A webinar titled “Financial Intelligence: Unlocking Your Path to Financial Success” was conducted on 30<sup>th</sup> May 2025, by Mr. Vinay Karlagere from *TaxWise Consultants*. The session covered key concepts of

financial intelligence, offered strategies for sound financial decision-making, and provided insights into GST exemptions and regulatory relaxations available for start-ups.



## Event Organised

- ⤴ A two-day hands-on workshop on “Food Safety and Standards” was jointly conducted by BioNEST Incubation facility at CSIR-CFTRI and ITCFSAN on 24<sup>th</sup> and 25<sup>th</sup> April, 2025. The training was facilitated by Ms. Vaidehi Kalzunkar (Deputy Director, FSSAI), Mr. Mohd. Salman (Technical Officer, FSSAI) and Dr. Nehul Shrigod (Scientist, CFTRI). The workshop aimed to enhance participants' understanding of food safety regulations, compliance protocols, and industry best practices, and around sixty participants had participated in the workshop. It attracted a diverse audience comprising startup founders, representatives from established food companies, and academicians committed to strengthening food safety practices in their respective domains.



## New Incubatees

6 New incubatees have enrolled in the incubation centre at CSIR-CFTRI, Mysuru

### 1) Ingex Botanicals Pvt Ltd

Founder : Dr Prasanna; Mr. Sudheer Karat; Mr. Saud Mohamed

The company aims to utilize botanical ingredients / Carotenoids / Plant protein isolates as nutraceuticals to address market needs with innovative, customized solutions.

### 2) Earth Kind Foods Biotech Private Limited

Founder: Supriya Barad, Raj Parwani

The company is dedicated to transforming agricultural residue into sustainable, high-quality cooking oil using advanced precision fermentation. The major raw materials used for this are sugarcane bagasse, wheat husk, rice husk, etc.

### 3) Fractal Beverages Private Limited

Founder : Ms Aaroji Kanitkar; Mr. Sandeepa Kanitkar

The company's objective is to make a protein-enriched RTD coffee-based beverage. They aim to provide an enhanced version of RTD coffee with protein delivered in quantities that minimally affect taste while making a substantial contribution to the consumer's diet.

### 4) Svastha Samriddhi Private Limited (IndiMeat)

Founder : Ms. Sayanika Deka, Mr. Jubanayan Saikia

IndiMeat aims to revolutionize protein consumption, addressing nutritional deficits and lactose intolerance through its innovative meat protein products.

### 5) GK Unique

Founder: Ramesha, N.J

The company aims to develop a carrot-based nectar incorporating probiotics. They focus on mass production of cultures and ensuring their viability, while estimating carotene content in the final product.

### 6) Shree RajaRajeshwari Traders

Founder : Manasa V

The company focuses on techno-commercial applications of spice nutraceutical nanoemulsions, including the extraction of Curcumin and Gingerols from Turmeric and Ginger spices.

## Accomplishments by BioNEST incubatees

- ⤴ SugarCan Innovation Pvt. Ltd., has signed a landmark MoU & sales agreement with Jogeshwari Kisan Samruddhi Producer Co. Ltd. and Pure Organic to become the Tata Group's exclusive manufacturing partner in April 2025
- ⤴ Shri Abhaya Foods has opened two franchise outlets under the brand name “Coco Cream” in Bangalore in April 2025
- ⤴ Earth Kind Foods was successful in securing the DST Nidhi Prayas grant from C-CAMP
- ⤴ Earth Kind Foods has won the pitch contest event organised by EWA Catalysts, Startup Karnataka, and Beyond Next Ventures, which has enabled them to get mentorship and an investment opportunity with Beyond Next Ventures (Japan)



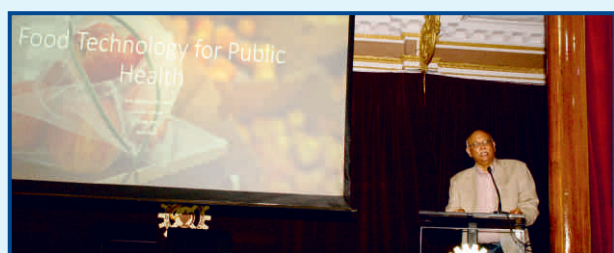
## Events

### Network Meeting on Probiotics, Postbiotics & Fermented Food-Based Start-ups & Entrepreneurships (April 11, 2025)

Network Meeting on Probiotics, Postbiotic & Fermented Food-Based Start-ups & Entrepreneurships was held on 11<sup>th</sup> April 2025. It was organised by the Dept. of Microbiology and Fermentation Technology, CSIR-CFTRI, in collaboration with BIRAC-BioNEST. Dr. B. Sesikeran, Former Director, National Institute of Nutrition (NIN), was the Chief Guest and delivered the Chief Guest address, and Dr. Sridevi Annapurna Singh, Director, CSIR-CFTRI, presided over the function.

### Platinum Jubilee Lecture Series

- Under the Platinum Jubilee Lecture Series 2024-25 and also as part of the Poshan Pakhwada 2025 celebration, the Third lecture in the series was organized on 11<sup>th</sup> April 2025 at the CSIR-CFTRI campus. Dr. B. Sesikeran, Former Director, National Institute of Nutrition (NIN), was the Chief Guest & Distinguished Speaker, who delivered the lecture on "Food Technology for Public Health".



- The fourth one was held on 9<sup>th</sup> May 2025. Dr. Alok Dhawan, Director, Centre of Biomedical Research, Lucknow & Former Director, CSIR-IITR, Lucknow, was the Chief Guest & Distinguished Speaker who talked on "Supporting Risk in Science: The bedrock of an Atmanirbhar and Viksit Bharath".



- The fifth lecture in the series was organized on 28<sup>th</sup> May 2025. Dr. Sharmila Shekhar Mande, Advisor, TCS Research (Former Distinguished Chief Scientist, TCS Research), Ayush Distinguished Scientist Chair, Ministry of Ayush, Visiting Professor

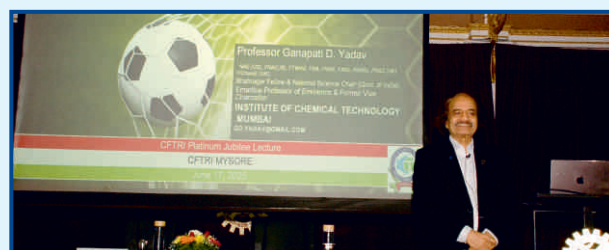
at IIT-Kanpur, IIT-Gandhinagar & IISER-Trivandrum, Distinguished Speaker, spoke on "Connecting the dots: Diet, Microbiome and Health".



- The sixth one was organized on 28<sup>th</sup> May 2025, wherein Dr. Shekhar C. Mande, Distinguished Professor, Bioinformatics Centre, Savitribai Phule Pune University, Pune, Honorary Distinguished Scientist, National Centre for Cell Science, Pune Former Secretary, DSIR and Director General, Council of Scientific & Industrial Research, Govt. of India spoke about "Agriculture, Food, Nutrition and Sustainable Development".



- The seventh lecture in this series was on 17<sup>th</sup> June 2025. Prof. Ganapati D. Yadav, Emeritus Professor of Eminence & Former Vice-Chancellor, Institute of Chemical Technology, Mumbai, delivered the lecture on "Converting Food Waste to Wealth: Sustainable Production of Fuels, Chemicals and Polymers".



- The eighth one was conducted on 25<sup>th</sup> June 2025. Dr. Nandini Harinath, Deputy Director, ISRO Telemetry and Tracking Command Network, ISRO, Bangalore, spoke on "Beyond Boundaries: ISRO's Space Odyssey".





(Dr. Sridevi Annapurna Singh, Director, CSIR-CFTRI, presided over on all the above events.)

### Birth Anniversary Celebrations of B R Ambedkar (April 14, 2025)

Floral tributes were offered by the Director and Staff to Bharat Ratna Dr. B.R. Ambedkar, architect of the Indian Constitution, on his 134<sup>th</sup> Birth anniversary on 14<sup>th</sup> April 2025.



### Webinar on “Role of IP in Innovation & Entrepreneurship (April 17, 2025)

Webinar on “Role of IP in Innovation & Entrepreneurship” organised by BIRAC-BioNEST was held on 17<sup>th</sup> April 2025. Mr. R. Shivakumar, Founder and Managing Attorney of Shiv Attorney, delivered the talk on “Setting House in Order-An IP Perspective for Startups”. The webinar discussed how start-ups can leverage Intellectual Property (IP) to establish market exclusivity, attract investors, and generate revenue through licensing

### Half-day colloquium on “Tribal Knowledge and Wisdom (April 25, 2025)

A Half-day colloquium on “Tribal Knowledge and Wisdom” was held on 25<sup>th</sup> April 2025 at CSIR-CFTRI, on the occasion of Janjatiya Gaurav Varsha (JJGV) initiated by Govt. of India. Shri Ravindra Thakare, IAS and State Information Commissioner & Former Additional Tribal Commissioner, Govt. of Maharashtra, was the Chief Guest and inaugurated the programme along with Dignitaries. Dr. Prakash K. R., Professor & Head Mechanical Engineering Division, NIE, Mysuru, and Dr. Shyam Koreti, Dean, Faculty of Humanities, RTMNU, Nagpur, were the Guest of Honor and delivered the talks. Dr. Sridevi Annapurna Singh, Director, CSIR-CFTRI, presided over the function. Dr. Prakash M Halami, Chief Scientist & Head, Microbiology and Fermentation Technology Department, who is Nodal Officer JJGV,

CSIR-CFTRI, organizer of the event, welcomed the gathering.



### National Technology Day Celebrations (May 13, 2025)

National Technology Day celebrations were held on 13<sup>th</sup> May, 2025. Shri. Bhaskar Kalale, President TiE, Mysuru Chapter, was the Chief Guest and delivered the National Technology Day 2025 lecture. In the presence of dignitaries, Sponsored/ Consultancy Project agreements and Technology Transfer agreements were exchanged with three industries, namely, Kudumbashree, Kerala; Milma, Kerala, and Tatva Nutrifooods, Bangalore. The Chief Guest & Dignitaries distributed the Appreciation Certificates to the S&T Team members who developed these technologies. Dr. Aashitosh A Inamdar, Head, TTBD, welcomed the gathering and spoke about National Technology Day. Dr. Sridevi Annapurna Singh, Director, CSIR-CFTRI, presided over the function.



### Swachhata Pakhwada (May 15, 2025)

Swachhata pakhwada celebrations 2025 were held at CSIR-CFTRI on 15<sup>th</sup> May, 2025, and Dr. Sukumar Debnath, Chief Scientist, briefed about the programme. Mr. Suraj Kumar, Executive, Bisleri Intl. Pvt. Ltd, Bangalore, and CSIR-CFTRI Scientists delivered the talks. Dr. Sridevi Annapurna Singh, Director, presided over the function and distributed Prizes and Certificates to staff and students who won the competitions that were held as part of the celebrations.



## Launch of Nutritional Intervention Programme for Malnourished Children (May 22, 2025)

An event to launch the Nutritional Intervention Programme for Malnourished Children in Mysuru District event was organized at CSIR-CFTRI, Mysuru on 22<sup>nd</sup> May 2025. Mr. Thalikerappa, Managing Director of BNPM, was the Chief Guest, Mr. B. Basavaraj, Deputy Director, DWCD & Dr. Mohammed Shiraz Ahmed, Reproductive and Child Health Officer (RCHO), DHFW, were present as Guests of Honor. Dr. Sridevi Annapurna Singh, Director, presided over the function, and the programme was formally launched by distributing nutrition food supplement kits to five malnourished children. Dr. Jyothi Lakshmi, Sr. Principal Scientist, CSIR-CFTRI, explained about the programme and previous such studies undertaken by the Institute.



## World Environment Day (June 5, 2025)

World Environment Day 2025 was celebrated at CSIR-Central Food Technological Research Institute on 5<sup>th</sup> June 2025. This year, the theme of World Environment Day is **"Beat Plastic Pollution."** As part of the celebrations, His Highness Shri Yaduveer Krishnadutta Chamaraja Wadiyar, Hon'ble Member of Parliament, Mysuru-Kodagu Lok Sabha Constituency, Chief guest inaugurated "Sashwath Bharat Setu: Winning Net Zero Exhibition" organised by The Eco Factory Foundation, Pune, and CSIR-CFTRI Platinum Jubilee Garden – Amritavana. Dr. Sridevi Annapurna Singh, Director, CSIR-CFTRI, presided over the Function, and Shri. Anand Chordia, Founder, The Eco-Factory Foundation, Pune, spoke about the Sashwath Bharat Setu activities.



## World Food Safety Day (June 10, 2025)

World Food Safety Day 2025, with the theme "Food Safety: Science in action," was celebrated on the campus on 10th June 2024, conducted by Food Safety & Analytical Quality Control Laboratory (FSAQCL). The event was open to all students of various colleges. Dr. Parvatham Giridhar, Chief Scientist & Head, FSAQCL,

welcomed the gathering, especially students. Sri. Rajeshwar S. Matche, Chief Scientist & Head, Food Packaging Technology Dept., formally inaugurated the event and addressed the gathering on the importance and awareness of World Food Safety Day 2025. Various demonstrations on the detection of adulterants in edible oils, spice products, sweets, milk, honey, etc., and the use of analytical instruments used by the food safety laboratories were exhibited during the programme. A demonstration on food hygiene and microbial safety was also arranged. More than 200 students from various colleges participated in the programme.



## International Day of Yoga (June 21, 2025)

International Day of Yoga (IDY) 2025, with the theme "Yoga for One Earth, One Health," was held on 21<sup>st</sup> June 2025, at the CSIR-CFTRI Campus. Director, CFTRI Staff, Research scholars, and students actively participated by performing Yoga on the campus in front of Cheluvamba Mansion.

## Visitors to CSIR-CFTRI, Mysuru

- ✦ Mr. Leonidas Skaliotis, CEO, Flavourtech, Australia, and the team visited the Pilot plant facilities and interacted with Scientists on 8<sup>th</sup> May, 2025.
- ✦ Mr. Lavi Elad from Israel, partner of Woodpeckers Coffee Trading House, Bangalore, visited the Pilot plant facilities on 20<sup>th</sup> May, 2025.
- ✦ Japan delegation (6 Members) from Faculty of Health Sciences, Hokkaido University, Sapporo, Japan, headed by Prof. Kenji Monde, Prof. Siddabasave Gowda, and other faculty, visited on 29<sup>th</sup> May 2025. The team interacted with scientific staff to explore collaborations in the areas of Food Processing Technologies and HRD activities. The team also visited some of the facilities on the campus.
- ✦ Management Development Programme (MDP) on Financial Management Officer Trainees from ATI visited the facilities on 30<sup>th</sup> May 2025. Armed Forces Resident Doctors-MD Aerospace Medicine (IAM, IAF), Bangalore, visited the facilities on 6<sup>th</sup> June 2025.
- ✦ Dr. Veen Markus Bernhard from VTEC Ingredients, GmbH, Bavaria, Germany, and the Indian Team from M/s Sunitha Hydrocolloids visited the facilities on 25<sup>th</sup> June 2025 and interacted with R&D Scientists pertaining to Technologies and Food Hydrocolloids.



## Upcoming Events

- ✧ National Symposium on “Plant Proteins: Structure-Function, Human Nutrition, and Technological Advances” on 25<sup>th</sup> July 2025 at CSIR-CFTRI
- ✧ Independence Day on 15<sup>th</sup> August, 2025 at CSIR-CFTRI.
- ✧ National Nutrition Week 2025 Celebrations during 1-7<sup>th</sup> September, 2025 at CSIR-CFTRI.
- ✧ CSIR Foundation Day on 26<sup>th</sup> September 2025 at CSIR-CFTRI.

## Retirees

- ✧ Shri S.G. Jayaprakashan, Senior Technician (2), Food Engineering Department-April 30, 2025
- ✧ Dr. Kala R. Swamy, Chief Medical Officer, CFTRI Health Centre-May 31, 2025
- ✧ Dr. P. Prabhasankar, Chief Scientist & Head, Department of Flour Milling, Baking and Confectionery Technology - June 30, 2025

## Ph.D.s Awarded by AcSIR



Ashwin Kumar M S (2025). *Processing intervention to enhance the bio-availability of fortified iron and zinc in development of specialty wheat based products.* [Guide: Dr. Suresh D Sakhare, Sr. Principal Scientist, Department of Flour Milling, Baking and Confectionery Technology, and Co-Supervisor Dr. Jyothilakshmi A, Sr. Principal Scientist, Department of Traditional Foods & Applied Nutrition]

Rohini Karnat (2025). *Valorization of spent Idli and Dosa batter generated from the food industry and its application.* [Guide: Dr. D Somashekar, Principal Scientist (Retd.), Department of Microbiology & Fermentation Technology]



Shejawale Deepali Dnyaneshwar (2025). *Solvent extraction and Membrane Processing of soybean Oil.* [Guide: Dr. Navin K Rastogi, Chief Scientist (Retd.), Department of Food Engineering]



Mubthasima P P (2025). *Understanding the role of Exosomal WAVE3 protein in mitochondrial reprogramming and evaluating the potential of milk-based exosome formulation targeting human cervical cancer.* [Guide: Dr. Anbarasu K, Sr. Scientist, Department of Biochemistry]

Kaumudi Pande (2025). *Efficiency of exosomes for the delivery of Myricetin against ovarian cancer.* [Guide: Dr. Anbarasu K, Sr. Scientist, Department of Biochemistry]



Sreeram P K (2025). *Characterization of nanovesicles from edible plants and evaluation of its anti-inflammatory activity in Psoriasis models.* [Guide: Dr. Gopinath M, Sr. Principal Scientist, Department of Molecular Nutrition]

Nivya Vijayan (2025). *Inhibition of Srebp/Scap by Morin Ameliorates Experimental Metabolic Dysfunction-Associated Steatotic Liver Disease.* [Guide: Dr. Madan Kumar P, Sr. Scientist, Department of Biochemistry]





Venkat Prashanth (2025). *Delineating The Role of Adipocyte-Derived Extracellular Vesicles During Hepatic Stellate Cell Activation: Intervention with Morin*. [Guide: Dr. Madan Kumar P, Sr. Scientist, Department of Biochemistry]



Gangothri M V (2025). *Development of Nano porous delivery systems for hydrophobic nutraceuticals via Green chemistry approach: the case of MOFs*. [Guide: Dr. Nanishankar V Harohally, Sr. Principal Scientist, Department of Plantation Products, Spices & Flavour Technology]

Mayookha V P (2025). *Development of medium-chain triglyceride-enriched virgin coconut oil and its safety evaluation*. [Guide: Dr. Suresh Kumar G, Principal Scientist, Department of Biochemistry]



Smitha H M (2025). *Studies on the adhesion of erythrocyte to fibronectin in Type-2 Diabetes and its modulation by quercetin*. [Guide: Dr. C D Nandini, Sr. Principal Scientist, Department of Molecular Nutrition]



Vanivijay (2025). *Morin/Hp-B-Cd Inclusion Complex Modulates Gut Dysbiosis and Mitigates Fibrosis in Steatotic Liver Diseased Animals*. [Guide: Dr. Madan Kumar P, Sr. Scientist, Department of Biochemistry]



Madhumathi R (2025). *Applications of Milling Interventions for the Development of Quinoa Enriched Wheat-Based Products for Diabetic Management*. [Guide: Dr. Inmadar Aashitosh Ashok, Sr. Principal Scientist, Department of Flour Milling, Baking and Confectionery Technology, and Co-Supervisor Dr. K V Harish Prashanth, Principal Scientist, Department of Traditional Foods & Applied Nutrition]

Riya P (2025). *Investigations on Rivina humilis L., bioactives and the development of value-added products*. [Guide: Dr. Giridhar P, Chief Scientist, Department of Plant Cell Biochemistry]



## Select Publications

- ▲ Gade Pravin Savata., Sonkar R.M., Mudliar S.N., Bhatt Praveena. Comparative evaluation of biological, physical, and chemical approaches for the mitigation of sterigmatocystin: Mycotoxin of growing concern, *Food Chem.*, 2025, 475, art. no. 143259. (IF: 8.5)
- ▲ Soans S.H., Chonche M.J., Sharan K., Srinivasan A., Archer A.C. Apoptotic and anti-inflammatory effect of nisin-loaded sodium alginate-gum arabic nanoparticles against colon cancer cells, *Int. J. Biol. Macromol.*, 2025, 305, art. no. 141747. (IF: 7.7)
- ▲ Mawale Kiran Suresh., Giridhar P., Johnson T.S. Chitosan: A versatile polymer for enhancing plant bioactive accumulation, managing plant diseases, and advancing food preservation technologies, *Int. J. Biol. Macromol.*, 2025, 308, art. no. 142081. (IF: 7.7)
- ▲ Devadasu Vijay., Martin Asha. Comprehensive assessment of the nutritional, phytochemical, and volatile components present in the roots of *Asparagus racemosus*, an underutilized plant for food applications, *Food Biosci.*, 2025, 68, art. no. 106677. (IF: 5.9)

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